

2SC5025

Silicon NPN Epitaxial

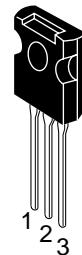
Application

High frequency amplifier

Features

- Excellent high frequency characteristics
 $f_T = 1.2 \text{ GHz typ}$
- Low output capacitance
 $C_{ob} = 5.0 \text{ pF typ}$

TO-126FM



1. Emitter
2. Collector
3. Base

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Item	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	30	V
Collector to emitter voltage	V_{CEO}	20	V
Emitter to base voltage	V_{EBO}	3.5	V
Collector current	I_C	0.3	A
Collector peak current	$i_c(\text{peak})$	0.5	A
Collector power dissipation	P_C	1	W
Collector power dissipation	P_C^{*1}	5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note: 1. Value at $T_C = 25^\circ\text{C}$.

2SC5025**Electrical Characteristics (Ta = 25°C)**

Item	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector to emitter breakdown voltage	V _{(BR)CEO}	20	—	—	V	I _C = 10 mA, R _{BE} = ∞
Collector cutoff current	I _{CBO}	—	—	1.0	mA	V _{CB} = 25 V, I _E = 0
Emitter cutoff current	I _{EBO}	—	—	1.0	mA	V _{EB} = 3 V, I _C = 0
DC current transfer ratio	h _{FE}	40	—	200		V _{CE} = 5 V, I _C = 50 mA
Base to emitter voltage	V _{BE}	—	—	1.2	V	V _{CE} = 5 V, I _C = 300 mA
Collector to emitter saturation voltage	V _{CE(sat)}	—	—	2.0	V	I _C = 300 mA, I _B = 60 mA
Gain bandwidth product	f _T	—	1.2	—	GHz	V _{CE} = 5 V, I _C = 100 mA
Collector output capacitance	C _{ob}	—	5.0	—	pF	V _{CB} = 10 V, I _E = 0, f = 1 MHz
Input capacitance	C _{ib}	—	10	—	pF	V _{EB} = 2 V, I _C = 0, f = 1 MHz

See characteristic curves of 2SC3652.

Maximum Collector Power Dissipation Curve

